

Infrastructure Development Department (IDD)
GOVERNMENT OF KARNATAKA

**Institutional Strengthening & Sector Inventory for PPP
Mainstreaming in Education**

Pre-Feasibility Report

Facility Management in Colleges

Bangalore, Mysore and Bagalkot districts

June 2012



ICRA Management Consulting Services Limited

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Abbreviations and Acronyms

Abbreviation / acronym	Full form
IIT	Indian Institute of Technology
IIM	Indian Institute of Management
NIT	National Institute of Technology
GER	Gross Enrolment Ratio
HRD	Human Resource Development
NUEPA	National University of Educational Planning and Administration
IBEF	India Brand Equity Foundation
PE	Private Equity
USD	US Dollar
FDI	Foreign Direct Investment
DIPP	Department of Industrial Policy and Promotion
PPP	Public-Private Partnership
IDD	Infrastructure Development Department
RO	Reverse Osmosis
CSR	Corporate Social Responsibility
EEL	Everonn Education Limited
BOOT	Build-Own-Operate Transfer
NGO	Non-Governmental Organisation
ICT	Information and Communication Technology
PG	Post Graduate
CAGR	Compound Annual Growth Rate
PWD	Public Works Department
AMC	Annual Maintenance Contracts
IT	Information Technology
R&D	Research and Development
Govt.	Government
No.	Number
CDF	College Development Fund
CDC	College Development Council
ITES	Information Technology Enabled Services
SPV	Special Purpose Vehicle
sq. ft.	Square Feet
Rs.	Rupees
DA	Dearness Allowance
ESI	Employees' State Insurance
PF	Provident Fund
CL	Casual Leave

Executive Summary

The Infrastructure Development Department (IDD) of Government of Karnataka has initiated the process of exploring Public – Private – Partnership (PPP) opportunities in Karnataka in several sectors including education. To achieve its objective, it had invited proposals from empanelled consultants for “Institutional Strengthening and Sector Specific Inventory for PPP Mainstreaming”. Through a competitive bidding process, ICRA Management Consulting Services (IMaCS) was awarded the project for education. IMaCS has conducted five pre-feasibility studies for exploring PPP opportunities in education in Karnataka. In this report, we are focusing on ‘facility management in colleges’. We have conducted the study through a combination of primary and secondary research. We held detailed discussions with key stakeholders in education including the Principal Secretary, Education, Vice Chancellors of different Universities, personnel in the Department of Collegiate Education, Principals of several Government colleges in Bangalore, Mysore and Bagalkot districts and private service providers.

Facility management is an integral component of the operation of any institution, and this impacts the quality education delivery to a great extent in colleges. Apart from the availability of good teachers, clean, quiet, safe, comfortable and healthy college environments are important components of successful teaching and learning. From our site visits, we have found that typically these services are deficient in colleges. Colleges located in city centres such as Bengaluru and Mysore are well maintained and have most of the basic facilities required. However, colleges located in interiors or even on the outskirts of the cities, lack basic facilities / have ill maintained facilities.

Given that Government colleges are public buildings, their construction and upkeep is the responsibility of the Public Works Department (PWD). All major electrical and plumbing works, major repair and maintenance and even the white-wash / painting, is the responsibility of the PWD. However, for all the minor electrical and plumbing works, minor repair and maintenance and housekeeping are the responsibility of the individual colleges. Most of the colleges have inadequate funds and thus are not able to maintain these facilities in a quality manner.

In the report, we have proposed that the management of facilities in Government colleges be conducted in the PPP mode for efficient and quality delivery of services. Based on our research, we have found that facility management in colleges has not been experimented in India in PPP before. In India, facility management industry in itself is in a nascent stage. Some of the schools and colleges in India where facility management services are currently managed by the private players are IIM

Ahemdabad, G.D. Somani Memorial School, Vivero International, VIBGYOR High and Whistling Woods.

For facility management in Government colleges in Karnataka, we have proposed to include both soft and hard services. Soft services include housekeeping and pest control, ground maintenance and landscaping and security services. Hard services on the other hand include minor civil works, minor electrical and plumbing works and water supply maintenance. In addition, equipment maintenance, white washing and painting services have also been proposed.

Given the nature of the services, the proposed PPP model is called the model of 'Management Contracts'. It is also called as 'outsourcing'. A management contract is one of the simplest forms of PPP. It is typically a contractual agreement for the management of a part (or whole) of a public enterprise by the private sector. Management contracts allow private sector skills to be brought into service design and delivery. However, the public sector retains the ownership of facility and equipment.

Under the contract, the private service provider will be responsible for managing the facilities in the designated colleges, while the control of all the services and ownership of property will remain with the Government. It is proposed that the facilities of the colleges will be managed on PPP for a period of 5 years, following which it can be extended to another 5 years depending upon the mutually agreed terms. The facility management service contract will be of different size and stature depending upon the size and condition of the colleges for which the Government decides to give out contracts to the private service providers.

As per our estimates, the total project cost for managing facilities in one college will take about Rs 30 lakh¹ per annum. If the Government decides to contract facility management for all 359 Government colleges in Karnataka to private service providers, the total project cost will work out to Rs 107.7 crore, which is 8.8 per cent of the total budget for college education in Karnataka for the year 2011-12. If the services delivered by the private service providers are not satisfactory, a penalty could also be imposed on them. There will also be control measures to ensure that the quality of services is up to mark and required levels.

Once implemented, the success of the project can be measured in terms of the improvement in the quality of the services in colleges. On a pilot basis, the project could be given out for Government

¹ For a college of size of 3 acres and a built up area of 2.1 acres, remaining being grounds.



colleges in Bangalore, Mysore and Bagalkot districts. Once successful, the model can also be scaled up to cover all Government colleges in all districts of Karnataka, thereby improving the quality of facilities in all Government colleges in Karnataka.

1. Introduction

1.1 Project Idea

1.1.1 Higher Education in India

The Indian education system is one of the largest in the world. Education in India is provided both by the public as well as private sector. It falls under the control of both the Central Government and the State Governments. The country has several high end institutions including 15 Indian Institutes of Technology (IITs), 11 Indian Institutes of Management (IIMs), and 30 National Institutes of Technology (NITs).

Higher education in the country is facing several constraints, including poor Gross Enrolment Ratios (GERs), very high pupil teacher ratios and poor quality of teachers and college infrastructure. GER in higher education currently stands at just 15 per cent. Human Resource Development (HRD) Minister Kapil Sibal aims at doubling it to 30 per cent by 2020. The move aims to triple enrolments in the tertiary sector from 13 million to 40 million.

Quality of education among other things is suffering due to high pupil-teacher ratios. These ratios are as high as 80:1 for primary schools in the State of Bihar. There is dearth of qualified and trained teachers. A study conducted by National University of Educational Planning and Administration (NUEPA) found that about 47 lakh elementary teachers in India have not studied beyond the higher secondary level. Basic infrastructure in the colleges is also lacking.

Education being a social sector, it is mainly delivered by the Government agencies. However, private sector participation has begun to emerge. Indian education space is viewed by the private players and investors with a lot of interest. According to India Brand Equity Foundation (IBEF), India education industry has a market size of USD 50 billion per annum and has investment requirement of about USD 100 billion by 2014 to meet the growing demands of the sector.

The private equity (PE) and venture capital investors have pumped USD 93 million into 10 education companies by July 2011. PE investments in the education sector increased from USD 129 million in 2009 to USD 183 million in 2010. The other large deals in the country include PremjiInvest's USD 43 million investments in Manipl Education and India Equity Partner's USD 37 million investments in IL&FS Education and Technology Services.

The Government is also taking steps to improve private investment in education sector. It has allowed 100 per cent FDI in the education sector. FDI inflows in the education sector during April 2000 to March 2012 stood at Rs 2,406 crore, according to Department of Industrial Policy and Promotion (DIPP). This, however, is only 0.30 per cent of the total FDI inflows that came into India during this period.

1.1.2 Why PPP in Education

The Public-Private Partnership (PPP) models have already succeeded in infrastructure sector with the development of highways, power plants, airports, etc. It is envisaged that Central and State Governments can now pursue the PPP model in sectors like education also in order to bridge the gap existing between equity and accessibility in India's education sector. PPPs are becoming a common tool to bring together the strengths of both the Government and the private sectors. The main benefits of PPP will be improvement in quality of education through new practices and higher standards. This will improve the student's experience and at the same time open the business opportunities for different private players to contribute to education through Government collaboration.

To explore PPP opportunities in Karnataka, the Infrastructure Development Department (IDD) of Government of Karnataka, had invited proposals from empanelled consultants for "Institutional Strengthening and Sector Specific Inventory for PPP Mainstreaming" in key infrastructure sectors including Agriculture, Education, Energy, Healthcare, Industrial Infrastructure, Irrigation, Public Market, Tourism, Transportation and Logistics, Urban and Municipal Administration, and Rural development.

IMaCS through a competitive bidding process was awarded the project for the Healthcare, Education and Urban and Municipal Administration sectors. The following are the pre-feasibility studies being conducted by IMaCS in the education sector:

1. Facility Management in Colleges
2. Facility Management in Schools
3. Establishment of Knowledge City
4. PPP in Sports Development
5. PPP in Vocational Training

1.1.3 PPP in Facility Management in Colleges

In this report, we are focusing on 'facility management in colleges'. Facility management is an integral component of the operation of any institution, and this impacts the quality education delivery

to a great extent in colleges. Apart from the availability of good teachers, clean, quiet, safe, comfortable and healthy college environments are important components of successful teaching and learning.

A range of non-educational services are required in colleges including sanitation, security, electricity, plumbing, water, repair and maintenance (building, furniture, laboratories etc.), gardening, landscaping, whitewashing, fire safety system, RO plant, power back-up etc.

Typically, these services have been found to be deficient and tend to be often provided by different service providers without adequately defining standards and monitoring. The project is trying to enable sharper identification of facilities management gaps in the system. Improvement of which can potentially contribute to improving performance of the education system with respect to aspects like enrolment and reduction in drop out ratio.

Given that the State Government plays an active role in college education, addressing the facilities management issues can potentially enable better and efficient maintenance of college assets that have been created with significant Government funding. In particular we envisage the following benefits:

- Address the need for improving and developing non-academic services in colleges.
- Enable college management and staff to focus on education delivery alone.
- Students will get more satisfied in terms of amenities available in the college, clean environment and safety.
- Once successful, the model can be easily be replicated in other colleges and scaled up to include other districts as well.

1.2 Approach and Methodology

Approach

We approached this exercise in three distinct phases, as outlined below:

Figure 1: Approach and methodology used for the study



Phase I - Assessment of current mechanism of facility management in colleges: This phase included conducting field surveys in selected Government colleges in Karnataka to gauge the current availability of services and to understand how these services are currently managed. We also interacted with the Department of Collegiate Education to understand the overall picture for the Government colleges in the State.

At the end of this phase, we summarised our findings to obtain the current list of facilities that are available in colleges and different agencies who are currently managing them. We also understood the current funding pattern for the same.

Phase II – Survey of service providers’ landscape: In this phase, we met selected service providers who are in the facility management space in Karnataka. The meetings were aimed at understanding the current landscape of services provided by these service providers and also gauging their interest for entering the facility management space in Government colleges. We also conducted secondary research to find information on facility management sector in India, key players in the market, range of services offered and charges levied.

Phase III – Based on the results obtained from the first two phases, we built a case for facility management in colleges with private participation. During this phase, we also worked out the operating framework and project financials. We also consolidated information on statutory and legal framework and indicative environment and social impacts.

Methodology

iMaCS conducted the analysis through a combination of primary and secondary research. The primary research involved:

1. Study of select Government colleges and analysis of the facilities
2. Talking to different vendors providing facility management services
3. Engaging in discussions with Department of Collegiate Education

As a part of the secondary research, we relied on information available in the public domain that we considered reliable to validate the findings of the primary survey. We also researched for information on implementation of similar projects in different States / countries.

1.3 Study of earlier reports in this sector in the relevant area

Internationally, PPP has addressed both physical infrastructure and quality of education services. While evidence suggests that PPP programmes have favourable impact on education, the experience is relatively new. Presently, in India, most partnerships involve volunteers or corporate philanthropy, as a part of Corporate Social Responsibility (CSR) initiatives. Challenges have been faced in building financially sustainable and bankable PPP models rather than a not-for-profit model.

Based on our research, facility management in Government colleges in PPP has not been experimented in India so far. PPP in education in India is in a very nascent stage and very few projects have been implemented or are under implementation. Some of the key PPP projects in education in India are given below.

1.3.1 Educomp and the Government of Punjab's Adarsh Scheme

Educomp has entered into an agreement with the Government of Punjab in establishing and running five Senior Secondary schools in Punjab under PPP model. While a school at Kalewal Village, Mohali District of Punjab is already functional the other four schools are at different stages of development of infrastructure and are going to be started in 2012. As a part of the Scheme, the Punjab Government has provided free land to Educomp on a 99 year lease. Capital expenditures incurred in infrastructure and recurring operating expenditure are shared between Punjab Government and Educomp. Management is the responsibility of Educomp. The Punjab Education Development Board will periodically review the performance.

1.3.2 EEL and partnership in ICT education

Everonn Education Limited (EEL) offers ICT-enabled computer education in government schools through turnkey projects on a BOOT model. The ICT division in EEL acts as an education service provider for computer education, computer literacy, computer-aided learning and teachers' training projects. While Everonn makes the initial investment, the same is reimbursed by government departments in periodical instalments spread over the years. The Company is currently operating in 6628 schools across sixteen 16 states.

1.3.3 Government aided schools

The most common form of PPP in education in India is the Private aided schools system in the country. As of 2009-10, 3.9 per cent of the pre-primary schools, 6.6 per cent of primary schools, 10.7 per cent of middle schools, 23.9 per cent of high schools and 17.9 per cent of higher secondary schools in India were Private aided schools. These are the schools which are run by private institutions with substantial financial assistance from the State Governments.

1.3.4 Residential schools in Andhra Pradesh

The Andhra Pradesh Government has announced a Scheme to set up one residential school in each assembly constituency, mostly in the rural and semi-urban areas in partnership with private players like NGOs, educational trusts and foundations set up by corporate sector. Under the scheme, land is provided free of cost by the State Government on a long term lease. The private partner would bear the entire non-recurring cost of construction and the school buildings and the school facilities. 75% of the seats in the school would be reserved for students to be sponsored by the State governments for which the State would pay the recurring cost. The remaining 25% of the strength will be filled up with the management quota seats.

1.3.5 Schools in Rajasthan

The State government of Rajasthan is availing of assistance in respect of this scheme under India Infrastructure Project Development Fund to set up five schools in each of the 33 districts under PPP. These schools will be set up in the rural areas at the block level. The private partner will bear the entire capital cost upfront. The state government would provide a capital incentive in instalments. The State government would also reimburse a part of the recurring cost for the sponsored students through vouchers. 50% of each school would be reserved for students sponsored by the State Government.

1.3.6 Model Schools

Government of India has proposed to set up 6,000 model schools at the rate of one school per block. These schools will be centres of excellence and would have infrastructure and facilities at least of the standard of Kendriya Vidyalayas with stipulation for pupil-teacher ratio, educational environment, appropriate curriculum, ICT enablement and emphasis on output and outcome. About 3,500 of the blocks in the country which are classified as educationally backward would have model schools that would be set up in the government sector by State governments with a major portion of assistance coming from Government of India. The remaining 2500 blocks would have model schools to be set up under PPP to be managed by the private partner with full autonomy and management control.

2. Sector profile

2.1 Sector overview

India possesses a developed higher education system which offers education and training in several subjects such as arts and humanities; mathematical and social sciences; engineering; medicine; dentistry; agriculture; education; law; commerce and management; music and performing arts; national and foreign languages; culture; communications etc.

As of 2009 (latest data available from MHRD), India had 436 universities and university level institutions; 25,938 colleges and 1,914 polytechnics. The colleges included 2,894 engineering and 2,074 medical colleges, among others.

Table 1: State wise college distribution in India

Sl. No.	State	Arts, Fine Arts, Social Work, Science & Commerce	Engineering/ Technology/ Architecture	Medical	Education/ Teacher Training	Others	Total Colleges
1	Andhra Pradesh	1970	698	415	615	775	4473
2	Arunachal Pradesh	17	3	1	1	1	23
3	Assam	337 [^]	9	7*	40**	153 [^]	546
4	Bihar	817	10	37	33	134	1031
5	Chhattisgarh	365	131	42	4*	42	584
6	Goa	22	2	2	0	13	39
7	Gujarat	577	29	114	254	244	1218
8	Haryana	238	154 [^]	50*	447	113	1002
9	Himachal Pradesh	377	14	23	82	86	582

Sl. No.	State	Arts, Fine Arts, Social Work, Science & Commerce	Engineering/ Technology/ Architecture	Medical	Education/ Teacher Training	Others	Total Colleges
10	Jammu & Kashmir	92	4	15	147	45	303
11	Jharkhand	110 [^]	4 [^]	12 [^]	9 [^]	26 ^{**}	161
12	Karnataka	369	174	423 ^{**}	0	13 [*]	979
13	Kerala	192	98 ^{**}	125 ^{**}	21	12	448
14	Madhya Pradesh	896	208	102	102 ^{**}	3	1311
15	Maharashtra	2074	312	141	471	448	3446
16	Manipur	59	3	1	5	5	73
17	Meghalaya	88	2	3	4	21	118
18	Mizoram	23	0	2	2	2	29
19	Nagaland	45	0	0	3	26	74
20	Odisha	634	82	69	14	75	874
21	Punjab	234 [^]	82	37	48	177	578
22	Rajasthan	1135	96 [*]	54 ^{**}	111 ^{**}	214 [^]	1610
23	Sikkim	5	2	3	2	6	18
24	Tamil Nadu	589	440	198 ^{**}	645	64	1936
25	Tripura	16	2	4	1	6	29
26	Uttar Pradesh	2361 [^]	212 [^]	104 [^]	128 ^{**}	299 [^]	3104
27	Uttarakhand	107	14 ^{**}	20 ^{**}	24	60 ^{**}	225
28	West Bengal	434	73	51	103	180	841
29	Andaman & Nicobar Islands	2	0	1	1	1	5
30	Chandigarh	8	7	4	3	2	24
31	Dadra & Nagar Haveli	1 [^]	0	1 [^]	1 [^]	0	3
32	Daman & Diu	1	0	0	2	0	3
33	Delhi	89 [*]	15 [*]	8 [^]	2 [^]	41 [*]	155
34	Lakshadweep	2 [*]	0	0	1 [*]	0	3
35	Puducherry	35	14	5	31	5	90
Grand Total		14321	2894	2074	3357	3292	25938

** - repeated from 2006-07, * - repeated from 2007-08, ^ - repeated from 2008-09

A total of 18.3 lakh students were enrolled in Post Graduate (PG) degree courses, as of 2009-10. Most of these students at 41 per cent were in Arts stream. Another 1.38 crore were enrolled in Under-Graduate (UG) degree courses.

As mentioned earlier, the GER in higher education (18 to 23 years) in India is just 15 per cent. It is highest in Delhi at 47.9 and lowest in Daman & Diu at just 2.3. Total number of teachers in higher education is 6.5 lakh, bringing the pupil-teacher ratio at 24 for All-India average. It is worst in Uttarakhand at 83:1 and best in Manipur and Meghalaya at 10:1 each.

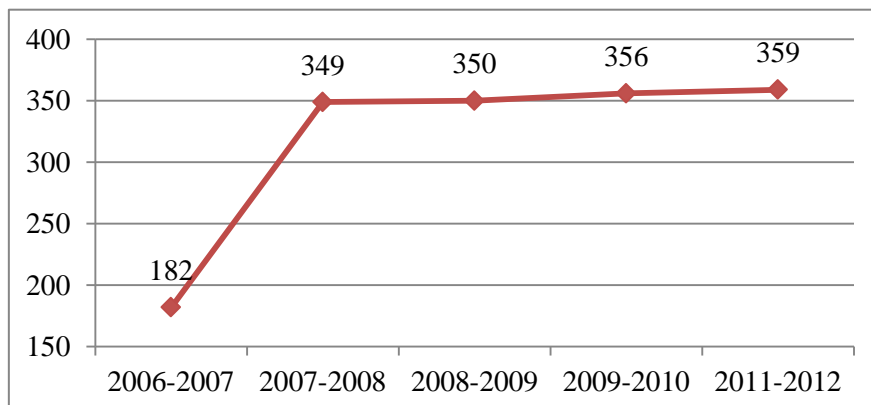
2.2 Regional profile

Karnataka is also known as the 'Knowledge Hub of India'. The Education Secretariat in Karnataka has Principal Secretary, Higher Education who oversees the Department of Higher Education and the Secretary, Education Department (Primary and Secondary Education) who oversees the primary, secondary, pre-university, vocational, adult education, public libraries, printing stationery and publications.

For higher education, the State has 44 universities / deemed universities. There are a total of 1,362 colleges enrolling 515,838 students. Most of the colleges at 52 per cent are private unaided, followed by 26 per cent Government owned and remaining 22 per cent private aided colleges. College education is taken care of by the Department of Collegiate Education.

In this section, our focus is mainly on Government colleges as this is where we are envisaging PPP in facility management. As of 2011-12, Karnataka has 359 Government colleges. The number of colleges increased substantially by 92 per cent from 182 in 2006-07 to 349 in 2007-08. This was a part of the State Government initiative to expand college education in the State by doubling the number of Government degree colleges. The number of Government colleges has remained more or less stagnant since then.

Figure 2: Year-wise number of Government colleges in Karnataka



Source: Department of Collegiate Education

As of date, the Government colleges together have 249 working principals and 7,600 teaching and non-teaching staff. There are vacant seats for 83 principals and 3,013 teaching and non-teaching staff.

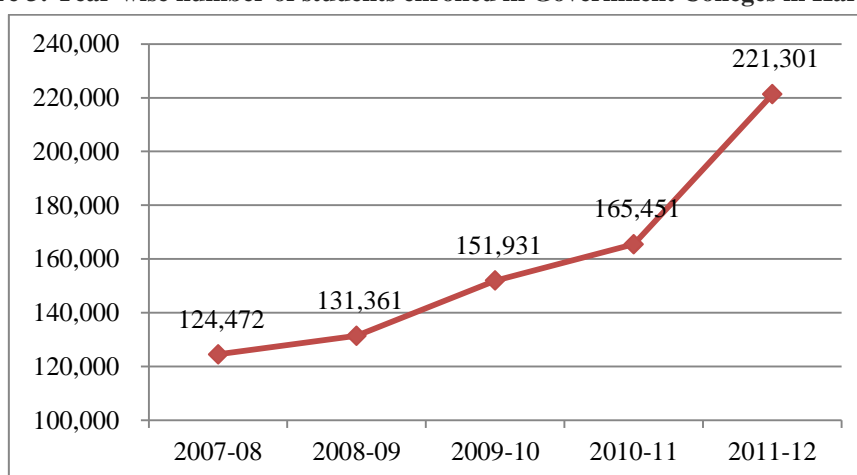
Table 2: Staff in Government Degree Colleges in Karnataka

	Sanctioned	Working/ Filled	Vacant
Principal	332	249	83
Teaching	5861	5062	799
Non-teaching	4752	2538	2214
Total	10,613	7,600	3,013

Source: Department of Collegiate Education

As of 2011-12, Government degree colleges in Karnataka had a total student enrolment of 2.2 lakh. This has increased at a CAGR of 15.5 per cent between 2007-08 and 2011-12. Enrolment for girls has increased at a faster rate of 17.8 per cent, as compared to boys at 13.4 per cent.

Figure 3: Year-wise number of students enrolled in Government Colleges in Karnataka



Source: Department of Collegiate Education

2.3 Key Issues

PPP is tested and utilised more frequently in the hard infrastructure sectors such as roads, ports, power, telecom etc., as compared to social infrastructure like education. An attempt to introduce PPP models in social infrastructure is fraught with risks as social sectors are significantly different from hard infrastructure sectors.

Some of the key issues that can occur in course of implementing PPP in facility management in colleges are follows:

- Education and related services are perceived as the prerogative of the Government. Private participation in delivering services in Government colleges could be viewed with scepticism.
- The concept of facility management in PPP is new in India and could face the initial hiccups.
- Education is part of social sector and private players do not usually enter into a partnership out of development motives. They are focused on profits, which are hard to generate in social sectors.
- There might not be any direct streams of revenues for the private players, as the idea of levying charges on students for better services might not be socially acceptable. It will also be difficult to collect any fee directly from the colleges, as most of them are already crunched for cash.
- Government education sector is not profit-making, and is traditionally subject to strict Government regulations. The private sector might be discouraged by strict Governmental procedures.
- Most of the facilities in colleges are currently managed by Public Works Department (PWD). The private player might have to either work in collaboration with PWD or might have to wait for its approvals in some cases.
- Finding and choosing the right private agency for the right services is believed to be the key link. Their credibility, past records, experience and systems process needs to be assessed.
- Another issue is monitoring and evaluating the performance of private players in order to ensure the quality of services delivered is up to the desired levels.
- The payment mechanism will need to focus on monitoring the desired outcomes and allowing payment deductions and / or penalties if key performance indicators are not met. Given the complex service delivery structures in education, lack of baseline data on performance indicators may be a major barrier to structuring effective performance based PPP contracts.
- PPP models need strong political commitment and enabling legislation, clear policy and legal framework, strong oversight and dispute resolution mechanism, careful contract design and defining acceptable rate of return for the private sector. Some of the partnerships deals with simple contracts while others are more complex involving many stakeholders.
- Presently, there is no standardisation of PPP model in education.

3. Market / Need Assessment

To understand why PPP is required in facility management in colleges, IMaCS made field visits to a few colleges in the three proposed districts, namely Bangalore, Mysore and Bagalkot. The objective of the visits was to conduct first hand examination of the quality of services which are currently present and also to understand the constraints faced by the college administrations in implementing quality services. We have already provided broad information on colleges surveyed in section 3.3.

Given below are the key observations from the field visits:

- Colleges located in city centres such as Bengaluru and Mysore are well maintained and have most of the basic facilities required. However, colleges located in interiors or even on the outskirts of the cities, lack basic facilities / have poor quality facilities.
- Bigger colleges are able to generate sufficient funds for upkeep of facilities in the colleges. They are also able to hire personnel for managing facilities in their premises. However, smaller colleges lack funds and are not in a condition to hire personnel. They don't even have the basic housekeeping staff such as sweepers or toilet cleaners. The condition of toilets is unhygienic, buildings ill-maintained and there is lack of cleanliness. The grounds / gardens are ill-managed.
- Most of the colleges (big and small) are in need of civil construction works. Some colleges don't have their own buildings and are running out of primary schools or PU college premises. Few colleges have written proposals for building expansion, but the proposals have been pending for long.

Facilities in Government Colleges which have scope of improvement





Note: Pictures taken in (1) Government First Grade College, Frazer Town, Bangalore (running out of primary school premises); (2) Government First Grade College, Varthur Bangalore (running out of PU College building) and (3) Government First Grade College, Ullahalli, Nanjangud, Mysore

The pictures clearly demonstrate the case for better management of services.

Good status of facilities available in some of the Government Colleges



Note: Pictures taken in (1) Maharani Arts, Commerce and Management College for Women, Bangalore, (2) Government R.C. College of Commerce and Management, Bangalore, (3) Maharani Arts, Commerce and Management College for Women, Mysore, and (4) Government First Grade College, Bagalkot

Current process for facility management in colleges

Currently, facilities are managed in an unstructured way in colleges. There are no norms / guidelines regarding the same. Given that Government colleges are public buildings, their construction and upkeep is the responsibility of the Public Works Department (PWD). All major electrical and plumbing works, major repair and maintenance and even the white-wash / painting, is the responsibility of the PWD. However, for all the minor electrical and plumbing works, minor repair and maintenance and housekeeping are the responsibility of the individual colleges. For maintenance of these services, the colleges are not allocated any separate budget from the Government. For these, the colleges have to depend mainly upon CDF. The CDF is the amount which the colleges collect annually from the students (Rs 100 per student). In addition, there used to be funds generated by the CDC. However, recently in May 2012, CDC's powers to garner funds have been curtailed by the Government. Therefore, it is primarily the funds from the CDF which the colleges have to depend upon. The colleges utilise these funds to not even pay salaries to the housekeeping staff such as the sweepers, but also pays for minor electrical and plumbing faults. Other small repair and maintenance amounts are also met through the same.

Clearly, colleges with a bigger number of the students are able to collect a bigger amount of CDF funds, which might or might not be sufficient for maintenance of facilities. While smaller colleges are not able to mobilise adequate funds and are in desperate need of funds for maintenance of their facilities.

4. Project

4.1 Description of the Project

Facility management is an integral component of the operation of any institution, and this impacts the quality education delivery to a great extent in colleges. Apart from the availability of good teachers, clean, quiet, safe, comfortable and healthy college environments are important components of successful teaching and learning.

The objective of the project is to deliver all non-academic services of the colleges in a more comprehensive and efficient manner and ensure wider coverage and quality in delivery. The services could include sanitation (manpower and material), security, minor electrical works, minor plumbing works, repair and maintenance (building, furniture, laboratories etc.), gardening and landscaping, whitewashing, fire safety system, RO plant, power back-up etc.



4.2 Components of the Project

Components of the project are mainly the facilities which are to be managed in PPP. The facilities can be divided into those requiring soft services and hard services. Detailed descriptions along with responsibilities for the private partner are given below.

A. SOFT SERVICES

1. Housekeeping service and pest control

- It is crucial in maintaining a hygienic and safe environment. Use most up-to-date ergonomically designed, environmentally friendly and cost-effective cleaning equipment and materials.
- Cleaning and mopping of floor areas and toilets.

- Disinfectants and chemicals should be used invariably every time for cleaning of the toilets. Cleaning of toilets and maintenance in a sanitized condition is extremely important.
- Dusting/cleaning of doors, windows, electric fixtures, furniture, filing cabinets, unobstructed work areas and telephones.
- Remove smudges around door jambs, push plates, light switches, counters and unobstructed work areas.
- Removal of cobwebs and dusting of lamps and ceiling fans.
- Washing windows and sweeping doormats.
- Collection and disposal of rubbish / dump.
- Pest control activities in the colleges to be performed.
- Maintain adequate stocks of consumables for the above, such as brooms, dust pans, dusters, mops, disinfectants and chemicals, disposal bags for collection of litter, buckets, toilet brushes etc.

2. Ground maintenance and landscaping

- Grounds maintenance and landscaping is essential for maintaining a pleasant outdoor environment by ensuring that grounds and parks are attractive, orderly and healthy.
- Mowing and trimming lawns, trees and shrub maintenance and leaf removal.
- Tree and plant healthcare
- Weed abatement
- Maintenance and repair of side-walks, college signage, roof drains and gutters.
- Sports ground maintenance
- Arranging for the equipment and materials required for ground maintenance and landscaping

3. Security services

- 24 hours manned guarding
- Security personnel to take initiatives in disaster management and safety management of the college in coordination with other staff

B. HARD SERVICES

1. Civil works, electrical and plumbing works, and water supply maintenance

- Maintenance of the minor civil works

- Repair and maintenance of electrical works including electrical systems, switch boards, loose and hanging electrical wires / cables, earthing system etc.
- Repair and maintenance of plumbing works including pipes, drainage / sewage system, and plumbing fixtures.
- Maintenance of water-filters for drinking water / or maintenance of RO plant, if applicable
- Arranging for material and equipment for the above works.

2. Equipment maintenance

- Replacement of light bulbs and tubes
- Repairing and replacement of cracked windows
- Repair and maintenance of furniture
- Maintenance of power back-up systems such as generators and invertors. Manage the Annual Maintenance Contracts (AMCs) for the same.
- Maintenance of AMCs with other equipment supplies such as computers, Xerox machines, laboratory equipment, etc.
- Maintenance of black-boards, white-boards, green-boards and digital boards

3. White-washing and painting

- Annual whit-washing of the entire college building (during summer holidays)
- Annual painting and polishing of furniture

4.3 Description of the Site

The project has decided to be taken up in three districts, namely Bangalore, Mysore and Bagalkot. The Department of Higher Education will take a decision on bundling together a few colleges in each of the three districts and partnering with private players for facility management in the same. As a part of our pre-feasibility study, we have made site visits to a few colleges in each of the three districts to understand the status quo of the current facilities and gaps therein. The description of each of the three districts, along with some basic details of the colleges surveyed is given in this section.

4.3.1 Brief profile of three districts

Bangalore Urban District: The district was formed in 1986 when erstwhile Bangalore district was split into Bangalore Urban and Bangalore Rural districts. It is bordered by Bangalore Rural district on

the west, east and north and the Krishnagiri district of Tamil Nadu on the south. It is home to the capital city Bengaluru and is the main economic hub of the State.

Bengaluru is also known as the *Silicon Valley of India* and *Technology Base of Asia*. It is the country's leading IT exporter. World Economic Forum has also identified Bengaluru as the *Innovation Cluster*. The district is a renowned centre of learning and is home to premier educational institutions such as IIM Bangalore, National Law School and Indian Institute of Science. Knowledge based industries have also started setting up base in the district. These include R&D Centres of Microsoft Research India, Phillips Innovation Campus, IBM's Global Innovation Centres etc.

Mysore District: The district is bordered by Mandya district to the north-east, Chamrajnagar district to the south-east, Kerala State to the south, Kodagu district to the west and Hassan district to the north. It is known for its famous tourist destinations like the Mysore Palace and Nagarhole National Park. The district is emerging as the next IT hub of India with presence of companies like Infosys and Wipro. It is already the 2nd largest software exporter of Karnataka. It is home to several educational institutions including University of Mysore, Chamarajendra Technical Institute, National Institute of Engineering, Central Food Technological Research Institute etc.

Bagalkot District: The district was formed in the year 1997. It is located in North Karnataka. It is bordered by Bijapur district on north, Gadag district on south, Raichur district on east, Koppal district on south east and Belgaum district on west. The district is popular for its silk and handloom industries. It is also known for *Badami*, its rock cut and structural temples. Prominent educational institutions in the district include University of Horticultural Sciences and B.V.V.S. S. Nijalingappa Medical College.

Table 3: Brief profile of three districts – Bangalore, Mysore and Bagalkot

Indicators	Bangalore	Mysore	Bagalkot
Area, sq.km.	2,190	6,854	6,575
No. of sub-districts	4	8	7
Population, No., 2011	95,88,910	29,94,744	18,90,826
Population density, per sq. km., 2011	4,378	437	288
Literacy rate, %, 2011	88.48	72.56	69.39
No. of Government Degree Colleges	20	17	19
No. of private aided colleges	44	12	11
No. of Government polytechnics	10	2	4
No. of private aided polytechnics	7	4	2

Source: Census 2001, Census 2011, Department of Collegiate Education, Department of Higher Education

4.3.2 Information on colleges surveyed

As a part of the pre-feasibility study, iMaCS visited the following colleges in the three districts:

1. Maharani's Arts, Commerce and Management College for Women, Bangalore
2. Govt. R.C. College of Commerce & Management, Bangalore
3. Govt. Science College, Bangalore
4. Govt. First Grade College, Frazer Town, Bangalore
5. Govt. First Grade College, Varthur, Bangalore
6. Maharani's Arts, Commerce and Management College for Women, Mysore
7. Govt. First Grade College, Ullahalli, Nanjangud, Mysore
8. Govt. First Grade College, Bagalkot

Fact-sheet of all the colleges surveyed is given below.

Table 4: Maharani's Arts, Commerce and Management College for Women, Bangalore

Name of the College	Maharani's Arts, Commerce and Management College for Women, Bangalore
Address	Bangalore - 560 001
Name of the Principal	K.R. Ravikumar
Year of establishment	1975
Status of college building	Own
Area, in acres	4
No. of students	3,625
No. of rooms	76
No. of desks per room	25
Availability of play-ground	Yes
Availability of library	Yes
No. of books in library	82,920
Availability of boundary wall	Yes
No. of toilets in the college	18
Availability of separate toilet for females	Yes
No. of sweepers	Five
No. of security guards	One
No. of gardeners	One
Availability of power back-up	Yes

Source: iMaCS Primary Survey

Table 5: Govt. R.C. College of Commerce & Management, Bangalore

Name of the College	Govt. R.C. College of Commerce & Management, Bangalore
Address	Bangalore - 560 001
Name of the Principal	Dr. Venugopal
Year of establishment	1952
Status of college building	Own
Area, in acres	3.56
No. of students	3000
No. of class rooms	56
No. of desks per room	24
Availability of play-ground	No
Availability of library	Yes, 2 libraries
No. of books in library	74,000
Availability of boundary wall	Yes
No. of toilets in the college	54
Availability of separate toilet for females	Yes
No. of sweepers	Seven
No. of security guards	No
No. of gardeners	One - sponsored by Dayananda Pai of Sanctuary Builders
Availability of power back-up	Yes

Source: IMaCS Primary Survey

Table 6: Govt. Science College, Bangalore

Name of the College	Govt. Science College, Bangalore
Address	N.T.Road, Bangalore - 560 001
Name of the Principal	Dr. K.S.Venkateshappa
Year of establishment	1921
Status of college building	Own
Area, in acres	5
No. of students	n/a
No. of rooms	n/a
No. of desks per room	n/a
Availability of play-ground	Yes
Availability of library	Yes
No. of books in library	n/a
Availability of boundary wall	Yes
No. of toilets in the college	n/a
Availability of separate toilet for females	Yes
No. of security guards	No
No. of gardeners	n/a
Availability of power back-up	n/a

Source: IMaCS Primary Survey

Table 7: Govt. First Grade College, Frazer Town, Bangalore

Name of the College	Govt. First Grade College, Frazer Town, Bangalore
Address	Frazer Town, Bangalore - 560 005
Name of the Principal	Prof. B.V. Krishanappa
Year of establishment	2007
Status of college building	College running out of a few rooms in primary school building. No separate land allotted for college.
Area, in acres	N/A
No. of students	200
No. of class rooms	6
No. of desks per room	16
Availability of play-ground	No
Availability of library	Yes
No. of books in library	5,000
Availability of boundary wall	Yes
No. of toilets in the college	One
Availability of separate toilet for females	No
No. of sweepers	One
No. of security guards	None
No. of gardeners	None
Availability of power back-up	None

Source: iMaCS Primary Survey

Table 8: Govt. First Grade College, Varthur, Bangalore

Name of the College	Govt. First Grade College, Varthur, Bangalore
Address	Varthur - 560 087, Bangalore East
Name of the Principal	Chandrashekhar V.
Year of establishment	2009
Status of college building	Currently, running from PU College Building. Land for college allotted in 2009-10. Construction expected to start in 2012-13.
Area, in acres	1.2 acres allotted for construction of college building.
No. of students	760
No. of class rooms	5
No. of desks per room	30
Availability of play-ground	No
Availability of library	Yes, housed in the same room as Principal office.
No. of books in library	7,824
Availability of boundary wall	Yes
No. of toilets in the college	17 toilets in PU college building.
Availability of separate toilet for females	Yes
No. of sweepers	One

Name of the College	Govt. First Grade College, Varthur, Bangalore
No. of security guards	None
No. of gardeners	None
Availability of power back-up	No

Source: iMaCS Primary Survey

Table 9: Maharani's Arts, Commerce and Management College for Women, Mysore

Name of the College	Maharani's Arts, Commerce and Management College for Women, Mysore
Address	JLB Road, Mysore - 570 005
Name of the Principal	Dr. A. N. Somashekhar
Year of establishment	1917
Status of college building	Own
Area, in acres	6
No. of students	4,500
No. of rooms	55
No. of desks per room	20 in UG courses and 40 in PG courses
Availability of play-ground	Yes
Availability of library	Yes
No. of books in library	91,172
Availability of boundary wall	Yes
No. of toilets in the college	6
Availability of separate toilet for females	Yes
No. of sweepers	Three
No. of security guards	Two
No. of gardeners	One
Availability of power back-up	Yes

Source: iMaCS Primary Survey

Table 10: Govt. First Grade College, Ullahalli, Nanjangud, Mysore

Name of the College	Govt. First Grade College, Ullahalli, Nanjangud, Mysore
Address	Hullahalli - 571 314, Nanjangud Tq, Mysore
Name of the Principal	Prof. Mariyaiah
Year of establishment	2007
Status of college building	Running out of Govt. Primary School Building. Separate land for college construction allotted in Jan 2011. Construction yet to start.
Area, in acres	2 acres land allotted for construction of college building
No. of students	201
No. of rooms	6
No. of desks per room	Oct-14
Availability of play-ground	No

Name of the College	Govt. First Grade College, Ullahalli, Nanjangud, Mysore
Availability of library	Yes
No. of books in library	9,055
Availability of boundary wall	Yes
No. of toilets in the college	Two
Availability of separate toilet for females	Yes
No. of sweepers	None. Sweeping done by sweepers from the Grama Panchayat.
No. of security guards	None.
No. of gardeners	None.
Availability of power back-up	None.

Source: iMaCS Primary Survey

Table 11: Govt. First Grade College, Bagalkot

Name of the College	Govt. First Grade College, Bagalkot
Address	Navangar, Bagalkot Sector No.49, Old Zp Office, Bagalkot - 587 101
Name of the Principal	Smt. S.S. Mariba Shetti
Year of establishment	2006 (shifted to Navanagar in 2009-10)
Status of college building	Own
Area, in acres	5
No. of students	411
No. of class rooms	12
No. of desks per room	15-20
Availability of play-ground	Yes
Availability of library	Yes
No. of books in library	6,900
Availability of boundary wall	No
No. of toilets in the college	2
Availability of separate toilet for females	Yes
No. of sweepers	None (Sweeping is done by peon only)
No. of security guards	None
No. of gardeners	None
Availability of power back-up	UPS for computer lab

Source: iMaCS Primary Survey

4.4 Interaction with Stakeholders

For primary information, iMaCS visited a few colleges in Bangalore, Mysore and Bagalkot districts. We interacted with the Principals of the colleges about the facilities available, current management of the facilities, facilities which are lacking / pending / under construction, issues faced by the college management in facility management and their willingness to work in PPP with private players. We

also met a few service providers in the facility management space to get a perspective on the facility management space and also to gauge their interest in entering into partnerships with Government in the education sector. The key discussion points are given below:

4.4.1 Interactions with College Principals

- Most of the facilities in Government colleges are maintained by PWD only. These include civil works, electrical works, plumbing, white-washing etc.
- Some colleges face delays in works due to lags either in application approval, or fund disbursement or commencement of work.
- For minor electrical and plumbing works, the college management depends on local electricians or repair mechanics. These works are financed out of College Development Fund (CDF) and College Development Council (CDC) funds. While big colleges have sufficient funds to take care of their expenses, smaller colleges often suffer due to lack of resources.
- For services like housekeeping and toilet cleaning, most colleges are facing shortage of Group D employees. They have to hire temporary cleaners using CDC and CDF funds. Colleges which are not able to afford these are suffering on the cleanliness front. Toilets in some of the colleges we visited were unhygienic, stinky and not in a usable condition.
- Most of the colleges don't have security guards.
- There is no database on currently available facilities and gaps therein in Government colleges.
- College in urban areas have better facilities as compared to colleges in rural areas.
- College principals are receptive to the idea of private players managing the college facilities, if better quality services are guaranteed.

4.4.2 Interactions with Facility Management Companies

- Most of the facility management services are done on contractual basis.
- Majority of the clients are private players. Government players currently contribute to less than 5 per cent of the total business.
- The biggest clients of facilities management services are corporates, mainly IT / ITES and financial services companies. Facility management in education is a relatively new area and is limited to housekeeping services as of now.
- There is willingness to undertake Government contracts in PPP, given that the contract size is attractive. Small contracts might not attract a lot of interest.

- Some big facility management companies are also involved in real estate / asset creation. Thus they are capable of handling the entire value chain of first creating the asset and then maintaining it.
- Facility management business in India is growing at a fast pace now. Some companies also undertake vendor management and provide certain value added services also, such as financial accounting, energy management etc.

4.5 Development Needs, Public needs & Planning Considerations

As discussed earlier, the idea of managing facilities in colleges on a PPP mode emanated to address the need for improving and developing specifically the non-academic services in Government colleges. Better and good quality services will enable college management and staff to focus on education delivery alone. The clean and hygienic college environment will also help improve student satisfaction in terms of amenities in the college. Once successful, the model can easily be replicated in other colleges also and can be scaled up to other districts as well.

There are certain planning considerations that need to be emphasised in facility management. The key ones are as follows:

1. Responsibilities of the manpower

- **Housekeeping**
 - The housekeeping staff should clean and mop the floor areas and toilets twice a day.
 - Disinfectants and chemicals should be used invariably every time for cleaning of the toilets.
 - Charts with check-list (housekeeping check list) should be maintained in corridors and toilets and should be signed by the housekeeping staff twice a day to report that the designated areas have been cleaned. Time of duty should also be reported.
 - Dusting/cleaning of doors, windows, electric fixtures, furniture, filing cabinets, unobstructed work areas and telephones should be done on a daily basis. Dusting should be one of the items in the housekeeping check list.
 - Any stains / smudges found in college premises should also be cleaned once in the day.
 - Removal of cob-webs and dusting of lamps and ceiling fans should be done once in a week. A weekly check-list should be maintained for the same.
 - Windows and door mats should be washed once in a week and should be reported in the check-list.

- All the debris collected from the college premises (including toilets) should be disposed off every day.
- Pest control activities should be performed in the college once in a month and a check-list should be maintained for the same. Mosquito sprays should be sprayed once in a week.

- **Ground maintenance and landscaping**
 - Mowing of grass should be done once in a week in the college lawns.
 - Watering of plants should be done every day.
 - Trimming and manuring of plants, trees and shrubs should be done once in a week.
 - Fallen leaves in the lawns and play-grounds should be cleared on a daily basis. Cleaning of all litter in the grounds should be the responsibility of the personnel taking care of landscaping.
 - Weed abatement should be done every week.
 - Dying plants should be replaced and new saplings should be planted once in a month.
 - Repair and maintenance of side-walks, college signage, roof drains and gutters should be performed as and when required.
 - A check-list should be maintained for all of the above activities.

- **Security**
 - Round the clock manned guarding should be provided and check-list to be maintained for the same.

- **Civil works, electrical and plumbing works, and water supply maintenance**
 - Repair and maintenance of minor civil works to be done on a need-based basis.
 - Repair and maintenance of electrical works including electrical systems, switch boards, loose and hanging electrical wires / cables, earthing system etc. should be done on a need-based basis. Bulbs and tubes which are out of order should be replaced the same day.
 - Repair and maintenance of plumbing works including pipes, drainage / sewage system, and plumbing fixtures should be done on a need-based basis.
 - Water filters and RO plants in the colleges should be maintained wherever they are available. Cleaning and maintenance should be done on a regular basis.

- **Others**

- Broken furniture, windows, glass panes should be replaced the same day or the next day.
- Maintenance of black-boards, white-boards, green-boards and digital boards
- Management of all the existing AMCs of the colleges to be the responsibility of the facility management service provider.
- College to be white-washed on an annual basis.
- The entire furniture in the college to be painted and polished on an annual basis.

2. **Maintaining supply of equipment and consumables**

- **Housekeeping**

- Disinfectants and chemicals to be maintained in adequate stocks.
- Disposal bags to be used for disposing litter / garbage.
- Dusters should be used for daily dusting.
- Mops and sweepers should be used for cleaning floors and toilets.
- Caddie kit to be maintained for carrying all consumables together.
- Brushes should be used for toilet cleaning, window cleaning etc.
- Dust pans should be used for litter collection.
- Adequate number of buckets to be maintained.
- Cob-web removed should be used.
- Soap / hand wash should be provided in the toilets.
- Napthalene balls should be used in the toilets.

- **Ground maintenance and landscaping**

- Brooms should be used for cleaning the grounds.
- Lawn mower should be used for mowing grass.
- Dust pans and disposal bags should be used for litter collection and disposal.
- Mops and sweepers should be used for cleaning side-walks.
- Dusters and brushes should be used for cleaning college signage.

- **Others**

- Since civil works, electrical and plumbing works, water supply maintenance and other repair and maintenance are need-based works, equipment and consumables need not be maintained for the same. These should be arranged as and when required.

Rigorous control should be exercised for all of the above. Outcomes of activities like housekeeping and security cannot be quantified. Only visual inspection can be conducted. Thus, control of outcomes should be exercised in term of timely completion of activities by all the manpower. Regular visual inspection should be conducted by the college management and staff. If the services are found unsatisfactory, the same should be reported.

4.6 Best practices and case studies for similar projects in India / World

Best practices and case studies for similar projects in India

Based on our research, we have found that facility management in colleges has not been experimented in India in PPP before. In India, facility management industry in itself is in a nascent stage. The companies that have ventured into this space also have limited experience with educational institutions. Most of their experience with the educational institutions is more or less limited to providing services to bigger schools and colleges, including some international schools and universities.

Some of the schools and colleges in India where facility management services are currently provided by the private players are IIM Ahemdabad, G.D. Somani Memorial School, Vivero International, VIBGYOR High and Whistling Woods.

Best practices and case studies for similar projects in the World

Internationally, PPPs have been experimented successfully in facility management space in the education sector. Given below are case studies of PPPs in facility management successfully implemented in UK in several schools by Amey, which is a service provider.

4.6.1 The Edinburgh Schools PPP Contract

The Edinburgh Schools PPP contract began in August 2001. Under the contract, Amey provides services to ten primary, five secondary and two special schools. These schools cater to the needs of 15,000 pupils. The services provided include

- Cleaning
- Catering
- Janitorial and security
- Grounds and building maintenance
- Fire and emergency management, and
- Disaster recovery

4.6.2 Northampton Schools PPP

Northampton Schools project is a 32 year contract operated by a Special Purpose Vehicle (SPV) led by Amber Infrastructure Ltd involving construction work by Galliford Try. The contract is for the construction of 11 new and 30 refurbished schools and provision of facility management and lifecycle services by Amey across the estate for the full contract term.

As a part of the contract, Amey provides the following services:

- Janitorial
- Grounds maintenance
- Cleaning
- Building maintenance
- Window cleaning
- Catering
- Security
- Helpdesk
- Winter service
- Environmental management
- Manned guarding
- General recycling, and
- Pest control

4.6.3 The Speke Contract

As a part of the Liverpool City Council's strategy for educational excellence; a suite of key services are delivered to the local community in Speke. These comprise a multi-educational site consisting of pre-school, secondary, adult and community education, alongside social services, housing projects, and sports and leisure facilities, to improve physical health. Amey has been providing facilities management services to this facility since the contract became fully operational in November 2002.

As a part of the contract, Amey provides the following services:

- Janitorial
- Grounds maintenance
- Cleaning
- Building maintenance
- Window cleaning

- Catering
- Security
- Helpdesk
- Waste management
- Pest control
- Manned guarding
- Grounds maintenance
- Reactive maintenance

4.7 Project Design

Education is a social sector service and often seen as the responsibility of the Government to its citizens. Thus, when it comes to designing PPP in education, sensitivities of the people have to be factored in. Based on our discussions with the different stakeholders, we found that the PPP cannot be designed in a way which will levy any charges on the students. Also, most of the colleges run on limited budgets and do not have additional capacity to pay to the private player for its services. Hence, there is no direct revenue stream which could be determined for the private service provider for facility management in colleges. Thus, given the peculiarities of the sector along with the nature of services that need to be rendered, the model which that best fits the situation is the model of 'Management Contracts', also called as 'outsourcing'.

Management Contract

A management contract is one of the simplest forms of PPP. It is typically a contractual agreement for the management of a part (or whole) of a public enterprise by the private sector. Management contracts allow private sector skills to be brought into service design and delivery, operational control, labour management and equipment procurement. However, the public sector retains the ownership of facility and equipment. The private sector is provided specific responsibilities concerning a service and is generally not asked to assume commercial risk. The private contractor is paid a fee to manage and operate services. Normally, the payment of such fees is performance-based. Capital investment is typically not the primary focus in such arrangements. Such contracts of less than three years duration are not included in the definition of PPP in India.

Table 12: Broad Characteristics of Management Contracts in India

Asset ownership during contract	Public
PPP Duration	Short to Medium Term (i.e. 3 to 5 years)
Capital investment	Not the focus
Private partner revenue risk and compensation terms	Low (Pre-determined fee, possibly with performance incentives)
Private partner roles	Management of all aspects of operation and maintenance
Features	This involves contracting to the private sector most or all of the operations and maintenance of a public facility or service. Although the ultimate obligation of service provision remains with the public authority, the day-to-day management control is vested with the private sector. Usually the private sector is not required to make capital investments.

Source: www.pppinindia.com

Management contract for Facility Management in Colleges:

For facility management in colleges, a range of outsourcing options is available. The starting point could be to outsource one service (such as housekeeping), followed progressively until all services are outsourced by individual contracts. However, the ideal situation would be to group together certain services and place them with one contractor – a concept known as 'bundling'. Once the services are bundled and contracted to one integrated service provider, it will save the college administration from the hassle of dealing with multiple vendors. Managing with just one contact point will free college administration's time from non-academic services and they will be able to focus on education delivery alone. In a 'management contract' PPP, there are different roles and responsibilities which will be assumed by the public and the private partner. We have outlined them below.

Roles and Responsibility of the Service Provider / Private Player

1. **Arranging the manpower for managing the facilities in the colleges:** Once the contract has been given to the service provider, it is his responsibility to arrange for the manpower that will be required for servicing of facilities in the colleges. It is not necessary for the provider to hire all the manpower on a temporary basis. It can also arrange people on contractual basis.
2. **Regular staff v/s need-based staff:** For services like housekeeping, ground maintenance and landscaping, and security, full time staff will be required in the colleges. While for other services like repair and maintenance (electrical, plumbing, equipment, furniture etc.), white-

wash etc., manpower requirements will be need-based only. Both regular staff and need-based staff will have to be arranged by the service provider only.

3. **Managing the payrolls of the manpower:** It will be the responsibility of the service provider to provide compensation to the manpower that it arranges / hires for managing the facilities in the colleges. The public player will not be liable to making any payments separately to the manpower. The public player will make the entire payment in totality to the service provider only.
4. **Handling any issues which the manpower might have:** Any issues which the manpower might have will be directly handled by the service provider only.
5. **Arranging for the materials and consumables:** All the material and consumables which will be required for managing the facilities in the colleges will be managed by the service provider only. The materials and consumables once bought will be the property of the public player. However, it will be the responsibility of the private player to estimate how much supplies will be required and maintaining the stocks accordingly.

Roles and Responsibility of the Colleges / Department of Education / Public Player

1. **Providing the necessary infrastructure:** Infrastructure in colleges where facilities have to be managed has to be provided by the public player to the service provider.
2. **Providing administrative support where necessary:** The manpower provided by the service provider will have to work at the premises of the public player. The public player will have to provide all the administrative support wherever necessary and ensure smooth coordination.
3. **Monitoring the services and quality of services provided by the service provider:** As discussed earlier, it is difficult to quantify the output of services delivered by the service providers in the colleges. The check-list system will help maintain record of how many times the services are being delivered. However, for quality of services, visual inspection will be required. This is where the college management / staff will have to play an active role. Time to time inspections should be made on the quality of services delivered. If the quality is found unsatisfactory, a note should be made on the same and feedback should be provided to the service provider. Following the feedback, corrective measures should be immediately implemented by the service provider. In case, measures are not undertaken in time, the issues should be escalated which could have a bearing on the payment to the service provider.
4. **Auditing for service delivery and expenditure incurred:** The public player will also be responsible for disbursement of fee to the private players. Thus, it will be its responsibility to conduct timely audit of funds and check how and where the funds have been spent. In case, any misappropriation is found, necessary actions should be taken for the same.

- 5. Making the payments to the service provider in time:** The public player should ensure that it makes timely payments to the private service provider. The latter is further responsible for paying wages / salaries to its manpower and is also responsible for ensuring timely supplies of consumables. If the service provider doesn't receive its payments / fees in time, timely and quality delivery of services could be hampered.

Contract Period

It is proposed that the facilities of the colleges will be managed on PPP for a period of 5 years, following which it can be extended to another 5 years depending upon the mutually agreed terms.

Cost of Service

The Government shall bear the entire cost of the project, as there is no tariff or revenue stream for the private service provider. Government will be giving out annual fees to the service providers. All the manpower, material and consumables required for running the project will be arranged by the private service provider only. The Government shall revise the service cost every two years as per the prevailing cost of inflation and service delivery. Management fees will be the bid variable during the process for finalising the service provider.

5. Project Financials

The facility management service contract will be of different size and stature depending upon the size and condition of the colleges for which the Government decides to give out contracts to the private service providers. As discussed earlier, while the colleges located in city centres are better managed, colleges in interiors are in want of immediate improvement of facilities. Thus, the quantum of work and effort involved in interiors will be much more in the initial phases of the contracts. Once the facilities in these colleges are brought up to the desired levels, the work and effort involved will go down.

As discussed earlier in the report, the services of the facility management will entail the following:

1. Housekeeping service and pest control
2. Ground maintenance and landscaping
3. Security services
4. Minor civil works, electrical and plumbing works, and water supply maintenance
5. Equipment maintenance
6. White-washing and painting

The costs for the above functions will be for the following components:

- a) Manpower Costs
- b) Material and consumables, repair and maintenance and others

5.1 Manpower cost estimates

Since the names and numbers of colleges which will be given out for facility management have not been decided yet, we have given estimates for a college with an estimated area of three acres. Assumptions for college area are given below:

1. College area: 3 acres / 130,680 sq. ft.
2. Built up area: 70 per cent of total area / 2.1 acres / 91,476 sq. ft.
3. Grounds: 30 per cent of total area / 0.9 acres / 39,204 sq. ft.

These assumptions are based on the average size of the colleges surveyed by us during the course of the study.

For such a college, manpower cost along with their cost is given in

Table 13.

Table 13: Manpower costs

Sl. No.	Staff	Number	Monthly Remuneration per person (Rs)	Total cost per month (Rs)	Cost per annum (Rs)
1	Housekeeping	10	8,000	80,000	960,000
2	Security guards	3	10,500	31,500	378,000
3	Gardeners	1	5,000	5,000	60,000
Total manpower cost			23,500	116,500	1,398,000

Source: iMaCS estimates.

Assumptions used for the above calculations are as follows:

1. Four to five persons are required for housekeeping for every acre of built up area.
2. One gardener is required for grounds of less than one acre size.
3. Security guards will work in shifts. Therefore, one required for each of the shifts.
4. Remuneration paid to the housekeeping staff and security guards is as per the minimum wages set by the Government of Karnataka. Remuneration components include the following:

- a. Basic
 - b. DA
 - c. Other Allowances
 - d. ESI
 - e. P.F.
 - f. Bonus
 - g. Leave wages (CL, PL), and
 - h. Uniform and shoes
5. Remuneration for gardeners is based on local industry standards.

The above assumptions are based on our discussions with the various facility management companies currently in operations in Karnataka.

5.2 Material and consumables, repair and maintenance and others' cost estimates

In addition to the manpower costs, expenditure will also be incurred on material and consumables which will be used for housekeeping. In addition, repair and maintenance charges will be incurred on grounds / landscaping, building maintenance and equipment maintenance. Building maintenance will include minor civil works, minor electrical works, minor plumbing works and white-wash / painting. The costs are given in Table 14.

Table 14: Cost of materials and consumables, repair and maintenance and others

Sl. No.	Material / consumable	Cost per month, Rs	Cost per annum, Rs
1	Materials and consumables for housekeeping	10,000	120,000
2	Garden / grounds maintenance	4,312	51,749
3	Building maintenance	-	1,372,140
4	Equipment maintenance and other contingency	-	50,000
	Total cost	-	1,593,889

Source: iMaCS estimates.

Assumptions used for the above calculations are as follows:

1. Materials and consumables used for housekeeping are as follows:
 - a. Phenyl
 - b. Soap oil
 - c. Acid
 - d. Urinal cake
 - e. Naphthalene ball

- f. Bombay broom
 - g. Coconut broom
 - h. Steel wool
 - i. Mop stick with refill
 - j. Cloth mop
 - k. Toilet brush
 - l. Dust Cloth
 - m. Bucket small
 - n. Bucket big
 - o. Harpic toilet cleaner
2. Garden / grounds maintenance cost is at Rs 0.11 per sq. ft. per month.
 3. Building maintenance cost is at 1 per cent of the developed cost of the building.
 4. For equipment maintenance and contingency, a lump sum amount of Rs 50,000 has been suggested.
 5. All the costs are for the college of the size of 3 acres, as described in section 6.1 above.

5.3 Total cost estimates

The total costs are a combination of manpower costs, costs of materials and consumables and costs of repair and maintenance. The total estimates are given in Table 15.

Table 15: Total cost estimates² for facility management of college of 3 acre size

Sl. No.	Component	Total annual cost, Rs Lakh
1	Manpower costs	14.0
2	Cost of materials and consumables, repair and maintenance and others	15.9
Total Cost		29.9

Source: iMaCS estimates.

As per our estimates, the total project cost for a college of size 3 acres and a built up area of 2.1 acres will be about Rs 30 lakh. Given that there are about 20 Government colleges in Bangalore Urban district, 17 Government colleges in Mysore district and 12 Government colleges in Bagalkot district, the total project cost for all these will be about Rs 14.7 crore. As of 2011-12, this is just 1.2 per cent of the total budget expenditure (plan and non-plan) on education in Karnataka.

² The project costs given above are ball park figures only. The actual cost estimation will be done by the Transaction Advisor for the project.

In due course, if the Government wishes to extend these services to all 359 Government colleges in Karnataka, the total cost estimates would be to the tune of Rs 107.7 crore, which is 8.8 per cent of the budget estimates for the year 2011-12.

6. Statutory & Legal Framework

The facility management providers should adhere to the following acts, laws and regulations for managing facilities in the colleges:

1. Karnataka Transparency in Public Procurement Act, 1999 and its further amendments
2. Karnataka Financial Code, 1958
3. National Building Code 2005 published by the Bureau of Indian Standards (BIS).
4. Minimum Wages Act, 1948 and the minimum wages fixed by the Government of Karnataka
5. The Contract Labour (Regulation & Abolition) Act, 1970
6. Other labour laws pertaining to gratuity, provident fund, ESI, leave rules, working hours etc.

The status of the compliance shall be verified during the annual audit conducted by the government.

7. Indicative environmental & social impacts

There are no adverse environmental or social impacts on account of facility management services of colleges. The project would offer a better support to the colleges of Karnataka by providing effective facility management services. This will free up college management's time to focus on education delivery alone. In addition, the improved college facilities and ambience will improve the satisfaction level of Government colleges and will make them world class. It would also reinforce the commitment of the government towards the welfare of its constituents.

8. Operating framework

8.1 Risks & Mitigation

The project involves a few risks both for the Government and also for the private service provider. These are given as follows:

Risks for the Government

- The private service provider may not be willing to continue the project throughout the contract period.
- The provider might not have the adequate manpower or skill to deliver the services.
- Services provided by the organisation may not match the requirements and quality specified by the Government.
- Lack of continuous monitoring and evaluation of services may lead to deterioration of service quality delivered by the private player.

Risks for the Private Player

- The project cost may turn out to be more than what is agreed in the contract. And once fixed, the project cost will be non-negotiable for a fixed time period.
- Attrition of specially trained employees might be high and the private player might face difficulty in arranging the requisite skilled manpower in time.
- There could be inadequate support from the college staff, as the concept is new and people might have apprehensions about its success.

Mitigation Strategies

- In case, the private service provider discontinues services before the end of contract period, the Government can withhold fees and even consider levying penalty.
- To ensure that the provider has adequate manpower and skill to deliver the services, it is preferred to have an experienced service provider to deliver the facility management services in the colleges. Experience with Government / public sector bodies should be an added advantage.
- The service provider shall frame effective human resource policies for the training and retaining manpower at the colleges. There shall be defined plans for replacement of trained manpower.
- The service provider shall maintain detailed books of records of consumables – in stock, out of stock, consumption pattern.
- The service provider shall produce a report to the college principal on the facilities managed in the college every month. The report shall contain:
 - Staff attendance report
 - Expenditure statement for consumables
 - Documentation of the check-lists which are maintained for all services on a daily basis. These should be compiled every month and submitted to the College Principal.

- This monthly report upon scrutiny by the College Principal shall be forwarded to the Department of Collegiate Education and the state nodal officer for the project.
- The college shall be subjected to six monthly stock audit, monthly accounts audit and weekly visual inspection cum audit.
- Surprise quality checks shall also be conducted and the service provider shall be penalised in case of violation of policies.
- At the start of the project, a management committee should be formed in each college, which will comprise the College Principal, a couple of staff and a couple of non-staff members. Induction should be held for these members on what the entire project entails. It will also be the responsibility of this committee to provide requisite support to the private service provider and ensure smooth functioning of the project.

8.2 Indicative Project Structure

Sl. No.	Parameter	Description
1	PPP Model	Management Contract
2	Concession Period	5 years, extendable to another 5 years based on agreement between the two parties
3	Concession Component	Right to manage specified facilities in designated Government colleges in Bangalore, Mysore and Bagalkot districts
4	Government Support	<ol style="list-style-type: none"> 1. Space and building 2. Timely payment to the service provider
5	Project Benefits	<ol style="list-style-type: none"> 1. Improvement and development of non-academic services in the colleges 2. Increased satisfaction levels of the students in terms of amenities available in the college, clean environment and safety 3. Reduction of the burden of facility management on the college administration so that the delivery of core services (education) can improve
6	Operation and Maintenance	<ol style="list-style-type: none"> 1. Manage facilities in colleges 6 days a week 2. Operation and maintenance of the material and consumables involved in facility management 3. Need based repair and maintenance of electrical fittings, plumbing, water supply, minor civil works, broken furniture, glass panes, black boards, white boards, green boards, digital boards etc.
7	User Charges Involved	There are no user charges involved in this project as this is suggested to be given by the Government as a management contract, wherein the Government will be directly responsible for making payments to the private service provider.
8	Inventory Management	<ol style="list-style-type: none"> 1. Private player to procure and manage all consumables and materials required

Sl. No.	Parameter	Description
	2.	Maintain optimum inventory and ensure nil stock out

9. Way Ahead

Based on the study, we believe that there is a need for proper facility management in the Government colleges in Karnataka. The discussions and analysis reveal that the project is feasible and will improve the quality of education delivery. While the college management will be able to focus on core activity which is education delivery, the overall learning experience will improve for the students. They will be able to enjoy a cleaner and safer college environment and will learn more in a hygienic ambience.

Currently, the project plan is to outsource the facility management of services in a few colleges in Bangalore, Mysore and Bagalkot districts. A cluster of college in each of the districts could be combined as a bundle and contracted to private service providers for facility management. Once implemented, the success of the project can be measured in terms of the improvement in the quality of the services in colleges. Once successful, the model can be replicated in Government colleges in other districts as well, thereby improving the quality of facilities in all Government colleges in Karnataka.

10. Annexures

Annexure 1: Number of University and University Level Institutions in India

Sl. No.	State	Central University	State University	Private University	Deemed University	Institution Established Under State legislative Act	Institution of National Importance	Total
1	Andhra Pradesh	3	20	0	4	2	2	31
2	Arunachal Pradesh	1	0	0	1	0	0	2
3	Assam	2	4	0	0	0	2	8
4	Bihar	1	13	1	2	1	2	20
5	Chhattisgarh	1	7	0	0	0	1	9
6	Goa	0	1	0	0	0	0	1
7	Gujarat	1	16	5	2	0	2	26
8	Haryana	1	7	0	3	0	1	12
9	Himachal Pradesh	1	3	1	0	0	2	7
10	Jammu & Kashmir	2	6	0	0	1	1	10
11	Jharkhand	1	4	0	2	0	1	8
12	Karnataka	1	16	0	11	0	1	29
13	Kerala	1	7	0	1	0	2	11
14	Madhya Pradesh	2	15	0	2	0	2	21
15	Maharashtra	1	19	0	20	0	2	42
16	Manipur	1	0	0	0	0	0	1
17	Meghalaya	1	0	1	0	0	0	2
18	Mizoram	1	0	0	0	0	0	1
19	Nagaland	1	0	0	0	0	0	1
20	Odisha	1	10	0	2	0	2	15
21	Punjab	1	7	1	2	0	3	14
22	Rajasthan	1	14	0	7	0	2	24
23	Sikkim	1	0	2	0	0	0	3
24	Tamil Nadu	1	18	0	21	0	3	43
25	Tripura	1	0	1	0	0	1	3
26	Uttar Pradesh	4	19	2	8	1	2	36
27	Uttarakhand	1	3	4	3	0	1	12
28	West Bengal	1	15	0	1	0	3	20
29	Andaman & Nicobar Islands	0	0	0	0	0	0	0
30	Chandigarh	0	1	0	1	0	1	3
31	Dadra & Nagar	0	0	0	0	0	0	0

Sl. No.	State	Central University	State University	Private University	Deemed University	Institution Established Under State legislative Act	Institution of National Importance	Total
	Haveli							
32	Daman & Diu	0	0	0	0	0	0	0
33	Delhi	4	2	0	11	0	2	19
34	Lakshadweep	0	0	0	0	0	0	0
35	Puducherry	1	0	0	1	0	0	2
	India	40	227	18	105	5	41	436

Source: Statistics of Higher and Technical Education, 2009-10, Ministry of Human Resource Development

Annexure 2: Total Plan and Non-Plan Budget for College Education in Karnataka

Budget, Rs. Lakh	2007-08	2010-11	2011-12
Total	48,753.02	111,595.26	122,266.52
Plan	9,087.43	348,42.03	326,00.12
Non-Plan	39,665.59	767,53.23	896,66.4

Source: Department of Collegiate Education

Annexure 3: Status of Buildings of Government Colleges in Karnataka

Building Status	Number of Colleges
Own Building	186
Building under Construction	110
Sites Available	35
Sites not Available	25

Source: Department of Collegiate Education

Disclaimer:

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